

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

**SVV TECHNOLOGY INNOVATIONS
INC.**

Plaintiff,

v.

ACER INC.

Defendant.

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Civil Action No. 6:24-cv-00536-ADA

Civil Action No. 6:24-cv-00538-ADA

Civil Action No. 6:24-cv-00539-ADA

JURY DEMANDED

PLAINTIFF'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Exhibit A	United States Patent No. 8,290,318 (“the ’318 Patent”)
Exhibit B	United States Patent No. 8,740,397 (“the ’397 Patent”)
Exhibit C	United States Patent No. 9,678,321 (“the ’321 Patent”)
Exhibit D	United States Patent No. 9,880,342 (“the ’342 Patent”)
Exhibit E	United States Patent No. 10,269,999 (“the ’999 Patent”)
Exhibit F	United States Patent No. 10,439,088 (“the ’088 Patent”)
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Exhibit M	United States Patent No. 11,276,795 (“the ’795 Patent”)
Exhibit N	United States Patent No. 11,616,157 (“the ’157 Patent”)
Exhibit O	United States Patent No. RE49,630 (“the RE630 Patent”)
Exhibit P	United States Patent No. 11,923,475 (“the ’475 Patent”)
Exhibit Q	United States Patent No. 11,156,340 (“the ’340 Patent”)
Exhibit R	United States Patent No. 11,821,621 (“the ’621 Patent”)
Exhibit S	United States Patent No. 11,194,085 (“the ’085 Patent”)
Exhibit T	United States Patent No. 11,402,562 (“the ’2562 Patent”)
Exhibit U	United States Patent No. 11,550,093 (“the ’093 Patent”)
Exhibit V	United States Patent No. 11,846,794 (“the ’794 Patent”)
Exhibit W	United States Patent No. 12,159,951 (“the ’951 Patent”)
Exhibit X	United States Patent No. 10,962,197 (“the ’197 Patent”)

- Exhibit Y Claim construction order: *SVV Technology Innovations Inc. v. Acer, Inc.*, No. 6:22-cv-00640-ADA (Apr. 6, 2023)
- Exhibit Z Plaintiff's Proposed Terms for Construction
- Exhibit AA Quantum dot, https://en.wikipedia.org/w/index.php?title=Quantum_dot (*last visited* Feb. 10, 2023)

I. INTRODUCTION

Plaintiff SVV Technology Innovations Inc. (“SVVTI” or “Plaintiff”) submits this Opening Claim Construction Brief wherein it offers its proposed constructions, which are consistent with the intrinsic and extrinsic record, and disputes the proposals of Defendant Acer, Inc. (“Acer” or “Defendant”).

II. LEGAL STANDARDS

This Court is familiar with the pertinent claim construction principles. For convenience, SVVTI cites to relevant authority in the body of its brief.

III. THE SCOPE OF THE CLAIM CONSTRUCTION ORDER

In the instant cases (the “2024 Cases”) SVVTI is asserting claims against not-previously-accused-products that were also asserted in the three 2022-filed cases (6:22-cv-00639, -640, and -641; collectively, the “2022 Cases”). The -640 Case was tried to a jury and judgment (6:22-cv-00640 Dkt. No. 179) was entered. Thus, issue preclusion exists against Acer for those terms that were decided adverse to Acer. This Court construed several disputed terms (and several agreed terms) in the 2022 Cases that are relevant to the 2024 Cases. Ex. Y. Acer acknowledges that it cannot relitigate those terms. *See* Def. Br. 1, n.1. In connection with the parties’ exchanges of terms for construal, SVVTI has requested that the Court apply the ordered constructions from the -640 Case to this case. *See* Ex. Z. This is also necessary to prevent Acer’s experts from offering opinions “that rely on claim construction positions that were previously proposed by Acer but rejected by the Court in its claim construction order.” *See* 6:22-cv-00640 Dkt. No. 130.

IV. TECHNOLOGY BACKGROUND

The asserted patents are generally directed to the field of optics and structures for efficiently distributing and converting light. More specifically, the patents are directed towards novel devices and methods with enhanced light beam diffusion, emission directionality, energy efficiency, material efficiency, space saving and luminous efficacy.

The unorthodox approach taken by the inventor, Dr. Sergiy Vasylyev¹, seeks to improve upon various aspects of light distribution within optical waveguides (light guides) and other light distribution components. Dr. Vasylyev recognized that thin sheet-form, large-area optical waveguides can be uniquely structured and used to create very efficient light distribution systems with a compact form factor and using minimum amounts of raw materials. He determined that, if thin sheet-form waveguides are specially patterned on their surfaces and coupled to a suitable light source (which may include LEDs, sunlight, etc.) in a certain way, the waveguides can efficiently transport and redistribute light from the light source while maintaining an extremely thin sheet form and help making the devices they are a part of extremely compact and even flexible. Dr. Vasylyev further made use of specific shapes and arrangements of microstructures that can be imparted onto surfaces of the optical waveguides to direct the redistributed light towards a target in a highly controlled fashion.

Dr Vasylyev further found that thin, layered sheet-form optical structures can be formed to make optical covers for light harvesting devices such that the absorption and light conversion efficiency of such light harvesting devices can be enhanced while using minimum amounts of expensive raw materials. Dr Vasylyev further made use of certain light harvesting materials, such as quantum dots which are small semiconductor particles that have unique optical and electronic properties, in the form of thin layers that can be made a part of the sheet-form optical structures. He identified specific practical configurations of the optical structures that efficiently trap and confine light, effectively recycling the light and causing it to pass through one or more layers of light harvesting materials multiple times with minimum energy losses and without sacrificing the compact form factor. The use of light recycling in conjunction with thin light harvesting layers in the manner invented by Dr. Vasylyev particularly allows for enhancing the useful light absorption and conversion as well as using light harvesting/converting materials at

¹ Dr. Vasylyev holds a Ph.D. in Physics and Mathematics from the Main Astronomical Observatory of National Academy of Sciences of Ukraine.

relatively low thicknesses, which in turn allows for reducing the intake of expensive materials thus reducing the cost and improving the utility of light distribution systems.

The '999, '089, '088, '205, and '795 Patents share a common specification. The '342, '562, and '135 Patents also share a common specification. The '318, '321, '306, and '191 Patents also share a common specification.

A. Acer's Background Arguments are Misleading

Acer's attempt to sort the patents into separate, narrow "buckets" of "input," "output," and "trapping" is a misleading oversimplification. This artificial construct ignores that each patent family discloses complete, integrated optical systems with multiple components working in concert and with various functions that work together to achieve a specific result. The patents must be understood by the full scope of their disclosures, not by these superficial and limiting labels. The respective patent documents, when read in their entirety, disclose integrated systems that encompass aspects of light input, guidance, extraction, distribution, collimation, and conversion, often within a single disclosure. Acer's characterization seeks to isolate these functions to create artificial distinctions that are not supported by the patents themselves.

B. RE49,630 patent

Acer's assertion that the RE49,630 ("RE630", Ex. O) patent is limited to "getting light output from a waveguide" is an inaccurate characterization that ignores the full scope of the disclosure. The disclosure describes complete and configurable illumination systems and is not limited to light output, as it explicitly describes light input from various sources, various light guidance and management principles, and various methods for directing the emitted light.

The patent is entitled "COLLIMATING ILLUMINATION SYSTEMS EMPLOYING A WAVEGUIDE," not "getting light output from a waveguide."

1. The disclosure describes light input from various sources, including LEDs

The patent discloses that a "suitable light source may include a light-emitting diode (LED), an incandescent lamp, a cold cathode fluorescent lamp (CCFL), sunlight focused by another optical system, a light-emitting end of an optical fiber, or any other suitable light

emitting device.” RE630 patent 9:24-28. It further describes that the “light source may also be positioned immediately adjacent to the light input end of waveguide 4.” RE630 patent 9:33-34.

2. The disclosure describes extensive details on light management and collimation

One aspect of the disclosure is providing a system with “one or more optical collimation elements extending along the longitudinal axis of the waveguide”. RE630 patent 3:1-5. It describes how a portion of the waveguide is “shaped in the form of an elongated collimating element” and how “light rays redirected by the light extracting features are further collimated by the linear collimating element and exit from the waveguide in the form of a directional beam.” RE630 patent 7:1-4; Abstract.

3. The disclosure describes detailed principles of light guidance and management

The patent describes how light propagates via Total Internal Reflection (TIR), where an exemplary ray “propagates along waveguide 4 while undergoing multiple reflections from the longitudinal walls of the waveguide by means of TIR.” RE630 patent 9:41-46. It further discloses methods for managing the uniformity of the output light by varying the spacing or size of reflectors.

4. The disclosure describes a wide variety of system configurations

The patent discloses numerous configurations, not a single structure. This includes an “elongated waveguide having a non-round transversal cross-section” and systems where “multiple waveguide structures... are positioned adjacent to each other to form a planar collimating panel” or which use a “planar lenticular lens array 40”. RE630 patent Abstract; 20:20-23; 20:29-39.

C. The '197 patent family

The characterization of the U.S. Patent 10,962,197 ('197 patent, Ex. X) family as relating only to “getting light input into a waveguide” is contrary to the explicit text of the disclosure, which describes entire illumination systems including various structures and methods for light guidance, extraction, and control. *See* Def. Br. 1.

1. The disclosure describes complete illumination systems, not just input mechanisms

The patent is titled “LIGHT GUIDE ILLUMINATION SYSTEMS WITH ENHANCED LIGHT COUPLING”. The summary states the disclosure is “directed to a system for injecting light into the face of a planar plate, slab or substrate of an optically transmissive material in one area and extracting at least some of the injected light from another area of the plate or substrate.” ’197 patent 2:47-51. The “Field of the Invention” section states the disclosure “relates to planar light emitting waveguides such planar plate or slab waveguides distributing light along the broad surface of the plate and emitting the distributed light from the broad-area plate surface.” ’197 patent 1:46-49. This describes a complete system for distribution and emission, not just an input mechanism.

2. The disclosure has wide-ranging applicability

The patent explicitly states it “relates to panel luminaires, illuminated panel signs, illuminated window pane signs, front lights, backlights, lighting panels, LCD display backlights, computer screens, advertising displays, road signs, and the like, as well as to a method for redistributing light from a variety of light sources.” ’197 patent 1:53-59.

3. The disclosure details numerous light extraction methods

The specification is replete with descriptions of light extraction. It describes “light extracting features 20” which “may include any light redirecting structure or device configured for extracting light from pane 4.” ’197 patent 10:15-18. These features can be configured to extract light “by means of scattering, reflection, refraction, deflection, diffraction.” can possess “phosphorescent or fluorescent properties,” or can be formed from an “image print”. ’197 patent 10:54-58; 11:12-13; 11:23-25.

4. The disclosure describes the principle of light guidance

The specification explains that the system enables light to be “propagated along the waveguide in response to the optical transmission and a total internal reflection generally towards at least one well-defined direction”. ’197 patent 2:58-64. It further explains that light propagates by “bouncing from opposing smooth broad surfaces 10 and 12.” ’197 patent 15:4-8.

5. The disclosure has broad applicability and contemplates various configurations

The patent explains that the disclosed systems can be applied to a wide range of structures beyond conventional light guides, including “framed or unframed vertical wall windows, door windows, glass or transparent-plastic facades of buildings, glazed openings in walls and ceilings, vertical or horizontal interior space partitions, screens, and the like.” ’197 patent 7:56-60. It also discloses numerous configurations for the light coupling element, including a “wedge-shaped” element, a “prismatic film,” and a “plurality of optical fibers”. ’197 patent Fig. 2; 5:4-7; Fig. 5; 5:17-21; Fig. 17; 6:5-9.

6. The disclosure is positioned for broad applicability, including in traditional edge-lit markets

The specification states that the technology “may be applied to a variety of panel lighting and signage applications where edge-lit LGPs have been traditionally employed.” ’197 patent 12:31-33.

D. The ’157 patent family

Acer’s characterization of the U.S. Patent No. 11,616,157 (’157 patent, Ex. N) family as being limited to either “trapping and absorbing light” or the specific application of “collecting the sunlight” is a significant misrepresentation of the disclosure. The patent is not so limited and describes broad technological principles for light harvesting and conversion, applicable to a wide range of light sources, materials, and devices.

1. The disclosed field is broader than solar energy collection

The “Field of the Invention” section explicitly states the disclosure “relates to photovoltaic devices, solar cells and light detectors having light trapping microstructures or layers to improve absorption of light within the light sensitive layer.” U.S. Patent No. 11,923,475 (’475 patent, Ex. P) 1:58-61. The repeated reference to “light detectors” demonstrates applicability far beyond solar power generation.

2. The disclosure describes a wide variety of light-converting materials

The specification is not limited to one type of material. It describes a “photoresponsive layer” that can be made from “crystalline silicon”, “amorphous silicon (a-Si) solar cells”, “a

CdTe photovoltaic structure” , “a copper indium gallium deselenide (CIGS) structure” , or a “multi-junction PV structure”. *See* ’475 patent 11:4-21. It further describes that the layer can incorporate “Si or other semiconductor photovoltaic materials in the form of particles, spheres, rods, clusters, quantum dots, nanodots, nanowires, etc. embedded into various transparent or semi-transparent materials”. ’475 patent 11:40-44. This variety underscores the broad nature of the disclosed technology.

3. The disclosure describes numerous structural configurations for managing light

The system is not a single, fixed design. The “light input ports” are disclosed with immense variety and can be selected from a group including “cavities, holes, extensions, bulges, prisms, prismatic grooves, cones, conical cavities, funnel-shaped cavities, surface texture, reflective surfaces, refractive surfaces, diffraction gratings, holograms, light scattering elements, and so forth.”. ’475 patent 4:61-67. Similarly, the “light collecting elements” can be chosen from a long list including “imaging lenses, non-imaging lenses... Fresnel lenses, TIR lenses... mirrors, Fresnel mirrors,” and others. ’475 patent 4:35-41.

4. The disclosure contemplates general light sources and is not limited to the sun

The specification repeatedly refers broadly to a “light source.” For example, the abstract describes the system in relation to a “light source,” and the summary of the invention describes the system operating in response to “light received on the aperture of the focusing array being injected into the photoresponsive layer” without specifying the origin of that light. ’475 patent Abstract; 4:4-6.

V. REBUTTAL OF ACER’S “BACKGROUND” STATEMENTS

SVVTI addresses Acer’s “Background” statements beginning on page 2 of Acer’s Opening Brief.

A. The RE630 Patent

1. Improper Limitation to a Single, Edge-Lit Embodiment

Acer’s argument attempts to define the entire RE630 patent by the single, edge-lit embodiment shown in Figure 7. This appears to be an attempt to improperly import limitations

from one embodiment into the claims and the disclosure as a whole. The patent discloses numerous other configurations that are not limited to this specific edge-lit planar structure.

For example, the abstract describes the system in terms of an “elongated waveguide having a non-round transversal cross-section”. RE630 patent, Abstract. The summary describes a “cylindrical waveguide structure” and notes that systems can be formed by an “array of light-collimating cylindrical waveguides”. RE630 patent 3:10-12; 3:33-35. The specification and drawings disclose a multitude of other embodiments, including waveguides with elliptical, plano-convex, and other complex cross-sections that are not limited to the edge-lit configuration of Figure 7. *See, e.g.*, RE630 patent Figs. 13, 19.

2. Improper Conflation of “Light Extraction Elements” with “Reflectors”

Acer repeatedly uses the narrow term “reflector” to describe the claimed “light extraction elements.” This is misleading. The patent uses “light extraction elements” or “features” as a broad term, and “reflectors” are just one example. The disclosure explicitly describes many other possibilities.

For example, the specification states the feature can be “any interruption, void, recess, bump, protrusion, deformity or discontinuity in surface 12”. RE630 patent 7:19-27. It explicitly includes “any light-scattering elements, such as white-paint dots, etched features in surface 12, surface texture, and the like.” RE630 patent 7:33-35. The disclosure further broadens the term to include “diffraction gratings, holograms or various-type scattering elements”. RE630 patent 15:63-16:4. Even in the context of exemplary embodiments where the features labeled as “reflectors”, these reflectors are touted as being examples of a much broader class of structures. For example, the patent states that “Reflectors 8 may comprise any suitable optical feature that can be formed in surface 12 for extracting light from waveguide 4.” RE630 patent 7:19-21. Acer improperly tries to equate the specific example with the entire class.

B. ’197 Patent Family (’197, ’340, and ’621 Patents) (P. 5 of Defendant’s Opening)

Acer’s assertion that “light coupling elements” must be “separate and distinct” structures is a flawed limitation contradicted by the disclosure. Acer repeatedly claims the elements are

“separate and distinct components,” but the patents do not impose this limitation. Moreover, the patents disclose embodiments where the coupling structure is not a separate, block-like component.

For example, the patents disclose that the element can be a “band or strip of optically transmissive prismatic film laminated onto surface 10 of window pane 4.” ’197 patent 17:27-30. Once laminated, a film is not a “separate and distinct” component in the way Acer implies. The disclosure also describes a multi-layer element configured to “redirect light internally by embedded microstructure rather than externally by surface microstructures.” ’197 patent 20:56-60. This describes modifying the properties of the waveguide, not just attaching a separate object. Acer’s own cited text, which mentions an element “attached to a face,” does not require the element to be a separate and distinct structure. *See* Def. Br. 6. A laminated film is also “attached.”

Acer’s characterization of the function as only “inputting light” is an improper oversimplification. Acer focuses entirely on “inputting light” to support its narrow construction of “light coupling area.” *See* Def. Br. 5. However, the disclosure makes it clear that the function of both the coupling elements and the coupling area is also to condition and direct the light.

The patents disclose that the optical element is configured to inject light “at a sufficiently low out-of-plane angle permitting for the subsequent light propagation within by means of a total internal reflection”. ’197 patent 3:25-29. This is a conditioning function, not merely “input.” The optical element also serves to direct light “towards a well-defined direction along the window pane so that the injected light can be mixed along the propagation path”. ’197 patent 3:30-34. This is a directing function.

Acer further attempts to define the “light coupling area” of U.S. Patent No. 11,156,340 (’340 patent, Ex. Q) by requiring the presence of the separate “light coupling elements” they

narrowly define from the '197 patent. Def. Br. 8. This is improper. The term “light coupling area” stands on its own.

Claim 1 of the '340 patent defines the area by its location (“located near the first edge”) and its function (the sheet propagates light “from the light coupling area”). It does not require or mention separate “elements.” Furthermore, the specification supports the creation of a “light coupling area” through methods other than attaching a separate block. An area of the waveguide surface covered by a laminated prismatic film, for example, forms a “light coupling area” without being a “separate and distinct” component.

The patent disclosure shows that the “light coupling area” may encompass a part of the waveguide itself, and it is not confined to the surface area of the waveguide where it is contacting the “light coupling elements,” as Acer posits. For example, Figure 13 and the disclosure accompanying it explains that the coupling element (50) and the waveguide (190) cooperate to “form a TIR envelope (indicated by a dashed box area 222).” '197 patent Fig. 13; 27:13-24. Within this envelope, the light ray “propagates along the longitudinal axis of element 50” before it “eventually escapes from envelope 222 and continues its propagation in the body of waveguide 190.” *Id.*

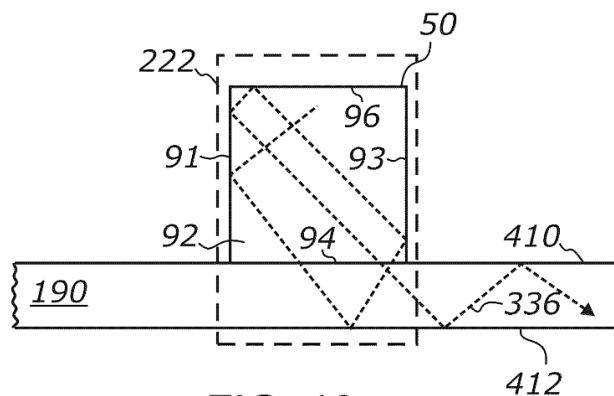


FIG. 13

This shows that “light coupling area” can be a functional, three-dimensional region, not just a two-dimensional surface patch. Acer attempts to limit the “light coupling area” to a portion of the top surface of the waveguide. The disclosure of the “TIR envelope” (222) proves

this is incorrect. '197 patent Fig. 13; 27:17-24. This TIR envelope is described as being formed by “the other three sides of element 50 as well as the portion of surface 412 of the waveguide immediately below element 50.” *Id.* The functional area that performs the coupling therefore includes surfaces from the coupling element and, critically, the opposing (412) surface of the waveguide itself. This directly refutes Acer’s attempt to limit the area to just the top surface where the element is attached.

The patent disclosures further shows that the “light coupling area” may encompass a considerably larger region of the waveguide than that of the individual “light coupling elements.” For example, the disclosure makes it clear that the “light coupling area” can include the entire modified region where the coupling system interacts with the waveguide, not just the “area” where separate “elements” are placed, as Acer argues.

The disclosure accompanying Figure 17 describes the “light coupling area” as the entire continuous region encompassing the fiber array. The disclosure explicitly states that each fiber is straightened “in the light coupling area,” indicating the area is a broader region that contains the array of fibers, including the spaces between them, not just the fibers themselves. '197 patent 29:43-47. It further states that a “light transmitting film 780” is “laminated onto surface 410” of the waveguide. '197 patent 29:30-37. The optical fibers (the “elements” in this case) are then “glued to film 780.” *Id.* The patent refers to this entire region as “the light coupling area.”

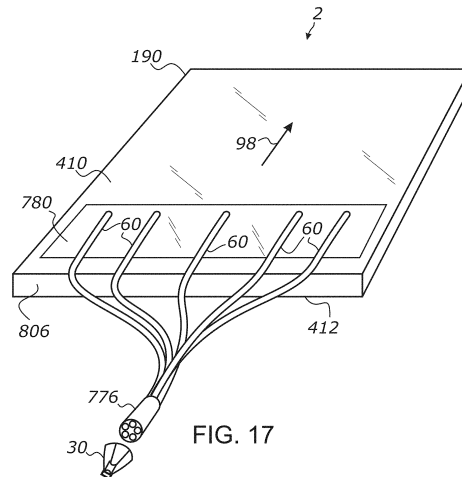


FIG. 17

C. The '157 and '475 Patents (P. 8 of Defendant's Opening)

Acer's central argument for separating the '157 patent family is that it "does not refer to waveguides or displays." This assertion is factually false. The specification, in describing the embodiment of Figure 17, explicitly states that light rays "propagate in photovoltaic layer 4 as in a **waveguide** by bouncing from surfaces 32 and 34 until absorbed". '475 patent 19:30-36.

The patent's direct and explicit use of the term "waveguide" to describe the function of the disclosed structure proves that Acer's attempt to create an artificial distinction between this patent family and the others is based on a false premise. The technology disclosed is not only functionally a waveguide, but is expressly described as such in the patent's own text.

A waveguide is a structure that guides light. The '157 patent discloses precisely such a structure. Claim 1 of the '475 patent, as quoted by the Defendant, recites "positioning the continuous broad-area photoabsorptive film layer between and parallel to the first optical layer and the thin sheet of reflective material." The disclosure further explains that this structure "causes multiple passage[s] of the trapped light through the photoresponsive (active) layer." '475 patent 3:21-26. The specification further states that the disclosed system can be used to "effectively capture a quasi-parallel beam of... electromagnetic energy, trap and **guide it** through

its photovoltaic element or layer.” ’475 patent 21:35-37 (emphasis added). A structure that traps and guides light and causes it to make multiple passages between its surfaces is, by function, a light guide or planar waveguide.

1. The ’157 patent discloses physics that are identical to waveguide physics

The patent operates on the principle of Total Internal Reflection (TIR) to “trap and guide” light. The first optical layer is described as having grooves “configured to reflect first light rays having first incidence angles with respect to a surface normal using a total internal reflection.” ’475 patent claim 1; 22:62-64. This use of TIR to confine light within a layer is the fundamental principle of waveguide operation that is a common thread through all the asserted patents.

Acer further improperly equates the broad term “light converting” with the specific “photovoltaic” effect. Acer’s entire argument hinges on exclusively quoting sections of the patent that mention “photovoltaic,” “solar cells,” and “generating electricity.” This creates the false impression that this is the only type of “light conversion” the patent discloses. However, the patent’s own language, including the Acer-quoted claim, describes broader functions.

Acer’s own exhibit quotes Claim 1, which describes the “light converting semiconductor material” as being “configured to absorb light selectively such that photons with a higher energy are at least partially absorbed and photons with a lower energy are transmitted”. This language is characteristic of the well-known physical process of down-conversion (e.g., fluorescence), which is a form of light conversion different from the photovoltaic effect.

Claim 1 also states that the material can comprise “quantum dots”. Quantum dots are well-known for performing wavelength conversion (fluorescence) in addition to being used in photovoltaic applications. *See* Ex. AA. By disclosing materials with these properties, the patent covers more than just the photovoltaic effect.

Acer’s problem-solution narrative is misleadingly narrow. Acer frames the problem solved by the patent as being limited to the thickness and cost of photovoltaic solar cells. While this is one application, the patent addresses a more fundamental optical problem.

The patent states a broader object is to provide “efficient light coupling and trapping” to “minimiz[e] energy loss.” ’475 patent 3:12-15. It describes the solution as utilizing “efficient light coupling and trapping mechanisms” which cause “multiple passage[s] of the trapped light through the photoresponsive (active) layer”. ’475 patent 3:30-35; 3:21-26. This principle of using microstructures to increase the effective optical path length in a thin active layer is a broad optical solution — not one limited to reducing the cost of solar cells.

VI. ARGUMENTS AND AUTHORITIES REGARDING DISPUTED CLAIM TERMS

A. “light extraction element” (RE630, claims 17, 25)

SVVTI’s Proposal	Acer’s Proposal
Plain and ordinary meaning. Alternatively, “a characteristic, structure, or material that causes light to be directed out of a layer or waveguide”.	This term should be construed under 35 U.S.C. § 112, ¶ 6. Function: receiving and redirecting light Structure: reflector 8 depicted in the figures and described in the specification

1. The Term Connotes Sufficient Structure

Williamson, despite weakening it, nonetheless confirmed that a rebuttable presumption against applying §112 ¶ 6 continues to apply in the absence of the word “means.” *Williamson v. Citrix Online*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (en banc). Acer can only overcome that presumption by showing that the claim term fails to connote sufficiently definite structure. *Id.* Acer has not done so.

a) The Specification Recites Sufficient Structure to Take the Claim Limitation Out of the Ambit of § 112(f)

In *Williamson*, the Federal Circuit looked to the written description in the specification to determine whether it “impart[ed] any structural significance to” the prefix “distributed learning control.” *Williamson*, 792 F.3d at 1351. The Federal Circuit found none, stating “we find nothing in

the specification or prosecution history that might lead us to construe that expression as the name of a sufficiently definite structure as to take the overall claim limitation out of the ambit of § 112, para. 6.”

Id. Therefore, the Federal Circuit “conclude[d] that the ‘distributed learning control module’ limitation fail[ed] to recite sufficiently definite structure and that the presumption against means-plus-function claiming [was] rebutted.” *Id.* In this case, however, and as explained below, the specification (and dependent claims) confer a “sufficiently definite structure as to take the overall claim limitation out of the ambit of § 112, para. [(f)].” *Williamson*, 792 F.3d at 1351.

b) Acer Has Not Met its Burden to Overcome the Presumption Against Applying §112(f)

While the presumption against the application of §112(f) is no longer a “strong” one after *Williamson*, it nonetheless remains a presumption that Acer must affirmatively overcome. *See Williamson*, 792 F.3d at 1349. Acer presents no expert testimony to show that the words of the claim would not be understood by persons of ordinary skill in the art as having sufficiently definite structure.

2. The RE630 Patent Does Not Limit “reflectors 8” as the Sole Structure

The “light extraction elements” are variously referred to in the specification as the “optical elements exemplified by discreet reflectors 8” and “light extraction features.” Indeed, Acer (at least) agrees that “light extraction elements” includes “reflector 8 depicted in the figures and described in the specification” because that is the structure Acer cited in its proposed construction. The RE630 patent, however, confers sufficient structure to “discreet reflectors 8” and is not limited to that element. Thus, following the phrasing of *Williamson*, the specification confers a “sufficiently definite structure as to take the overall claim limitation out of the ambit of § 112, para. 6” [now para. “(f)"].

The specification’s disclosure is comprehensive. First, the specification provides numerous structural examples. The RE630 patent does not treat “reflectors 8” as the sole structure. Instead, it explicitly broadens the definition. The disclosure states that “reflectors 8” are just one example of the claimed element and that they “may comprise any suitable optical feature that can be formed in surface 12 for extracting light from waveguide 4”. RE630 patent 7:19-21. This shows that “reflector 8” is used as an exemplary stand-in for a larger class of structures.

Second, the specification provides an extensive list of structures. The specification provides a detailed and extensive list of structures that can serve as a “light extraction element” -- not limited to reflectors, stating they can be “any interruption, void, recess, bump, protrusion, deformity or discontinuity in surface 12” and may also include “any light-scattering elements, such as white-paint dots, etched features in surface 12, surface texture, and the like”. RE630 patent 7:22-23, 33-35. It also discloses that “diffraction gratings, holograms or various-type scattering elements” may be used. RE630 patent 15:63-16:4. This wealth of structural information rebuts Acer’s argument that the term is a mere “nonce word”.

3. Acer Attempts to Import Limitations from a Preferred Embodiment into the Claims

As explained above, the RE630 patent does not limit “reflectors 8” as the sole structure. Instead, it explicitly broadens the definition. The disclosure states that “reflectors 8” are just one example of the claimed element and that they “may comprise any suitable optical feature that can be formed in surface 12 for extracting light from waveguide 4”. Acer’s suggestion that the structure is limited to “reflector 8 depicted in the figures” constitutes an improper attempt to import limitations from a preferred embodiment into the claims.

c) “Reflectors” Are Explicitly Positioned as an Example

Acer’s attempt to equate the entire class of “light extraction elements” with the specific example of “reflectors” is misleading. The specification introduces reflectors as an example — not a limitation. For instance, it describes the system as comprising “a plurality of optical elements exemplified by discreet reflectors 8”. RE630 patent 7:10-16. The use of “exemplified by” demonstrates that “reflectors 8” is illustrative, not exhaustive.

d) Broad Functional and Structural Descriptions Are Provided

The RE630 patent repeatedly uses broader terms like “light extracting features” and defines them with immense variety, far beyond the “reflector 8” shown in some figures. This directly refutes the Acer’s attempt to narrow the scope to a single depicted structure.

4. Acer's Argument Relying on the Reexamination Is Misplaced

Acer's reliance on the Reexamination Examiner's finding that the term invokes § 112, ¶ 6 is rebuttable. While an Examiner's opinion can be considered, it is not binding and can be refuted, as here, by a more thorough analysis of the intrinsic evidence.

a) The Examiner's Finding Is Inconsistent with the Specification

As detailed above, the specification is replete with structural descriptions for the "light extraction element". The Examiner's conclusion that "the term is not further modified by any structure" is factually incorrect when read against the full disclosure. The Court's role is to perform an independent construction based on the complete intrinsic record, which contains far more structural detail than the Examiner acknowledged.

b) Applicant's Silence Is Not an Unambiguous Disavowal

Acer's argument that SVV's silence during reexamination is "telling" is an overstatement. A failure to argue against an Examiner's construction does not rise to the level of a clear and unmistakable disavowal of scope, which is the high standard required. "Similar to disclaimers in the specification, '[t]o operate as a disclaimer, the statement in the prosecution history must be clear and unambiguous and constitute a clear disavowal of scope.'" *Continental Circuits LLC v. Intel Corp.*, 915 F.3d 788, 798-99 (Fed. Cir. 2019) (quoting *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1306 (Fed. Cir. 2007)). The specification itself provides the necessary structural support for the term, and this intrinsic evidence is the primary tool for claim construction.

5. Acer's Argument Involving the Dependent Claims is Misplaced

Acer argues that because dependent claims 18 and 19 add specific structure (e.g., "a generally round cavity" or "a generally round textured area of a reflective paint"), the independent claim term must lack structure. This is a flawed interpretation of claim differentiation. Furthermore, Acer's proposal can serve to exclude the embodiments disclosed in the dependent claims. Dependent claim 18 discloses: "each of said light extraction elements is formed by a generally round cavity having curved walls and configured to reflectively redirect a first portion of light toward said linear cylindrical lenses..." Similarly, dependent claim 19 discloses:

“each of said light extraction elements is formed by a generally round textured area of a reflective paint applied to said second major surface and comprises a two-dimensional pattern of light deflecting surface relief structure distributed over said generally round textured area.”

a) Dependent Claims Merely Narrow a Broader Genus

The doctrine of claim differentiation presumes that there is a difference in scope between independent and dependent claims. Here, the independent claim recites a broad class (a genus) of “light extraction elements,” which is fully supported by the specification’s numerous examples. The dependent claims simply recite a narrower species from within that disclosed class (e.g., a specific type of cavity or a painted area). The narrowing in a dependent claim does not prove the absence of structure in the independent claim; it only reinforces that the independent claim is broader in scope.

6. SVV’s Proposed “plain and ordinary meaning” Should be Adopted

The plain and ordinary meaning of “light extraction element” should be adopted because the term is not a functional nonce word, but rather a term that a POSITA would understand as connoting a distinct class of structures. The RE630 patent’s specification provides ample intrinsic support for this conclusion by repeatedly and extensively describing the varied structures that constitute a “light extraction element.” Acer’s argument that the term lacks structure and should be limited to the single embodiment of “reflector 8” is an improper attempt to narrow the claims and is rebutted by the intrinsic record, i.e., the patent’s own text.

a) Intrinsic Evidence of Structure for “Light Extraction Element”

The RE630 patent specification provides a POSITA with a rich understanding of the structures that can serve as a “light extraction element,” demonstrating that the term has a reasonably well-understood meaning in the art.

b) The Disclosure Provides a Broad Class of Structures

The RE630 patent makes clear that “light extraction elements” are not limited to a single structure. The specification notes that various features may be used, stating, “Any other light extraction features functionally equivalent or similar to reflectors 8 may also be used”. RE630

patent 15:63-66. It explicitly offers non-limiting examples beyond simple reflectors, stating, “For example, diffraction gratings, holograms or various-type scattering elements... may be used to extract light from the waveguide”. RE630 patent 15:67-16:3.

c) “Reflector 8” Is an Exemplary Term, Not a Limiting One

The specification introduces this term merely as an example, stating that the system includes “a plurality of optical elements exemplified by discreet reflectors 8”. RE630 patent 7:10-16. The patent further clarifies that this example represents a broader category of structures: “Reflectors 8 may comprise any suitable optical feature that can be formed in surface 12 for extracting light from waveguide 4”. RE630 patent 7:19-21.

d) The Specification Details Numerous Specific Physical Structures

The patent discloses a wide variety of physical implementations for the “light extraction elements,” providing clear structural character. The elements can be formed by physical alterations to the waveguide surface, including “any interruption, void, recess, bump, protrusion, deformity or discontinuity in surface 12”. RE630 patent 7:21-23. They can also be “light-scattering elements, such as white-paint dots, etched features in surface 12, surface texture, and the like.” RE630 patent 7:33-35.

The figures and associated text depict numerous structural profiles for these elements, including V-shaped grooves, undercuts, and corrugations. The elements are also shown with various three-dimensional shapes such as pyramids, cones, and domes.

Furthermore, while the Federal Circuit has held that an applicant may choose whether or not to invoke means-plus-function claiming, here the specification contains an explicit statement clarifying how the claims should be interpreted with respect to 35 U.S.C. § 112, ¶ 6: “No claim element herein is to be construed under the provisions of 35 U.S.C. 112, sixth paragraph, unless the element is expressly recited using the phrase ‘means for.’”. RE630 patent 22:18-20. This statement is a clear instruction from the patentee to the reader, including a POSITA, that terms such as “light extraction element” were intended to have a structural meaning sufficient to stand on their own without invoking means-plus-function treatment.

The “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Here, the patentee did not “clearly set forth a definition of the disputed claim” or “clearly express an intent to define the term.” *See id.* Neither did the patentee present “a clear disavowal of claim scope” through statements in the specification or prosecution history. *See id.* at 1366.

e) SVV’s Alternative Construction

Should the Court determine that the term “light extraction element” requires a construction beyond its plain and ordinary meaning, SVV’s alternative construction “a characteristic, structure, or material that causes light to be directed out of a layer or waveguide” should be adopted. This construction is directly rooted in and fully supported by the intrinsic evidence of the RE630 patent and more accurately captures the full breadth of the disclosed embodiments without being improperly limited to a single example, as is Acer’s construction.

The specification makes clear that the term is not limited to a single form, but rather encompasses a wide class of features that perform the recited function. This includes physical structures such as “prisms, prismatic grooves, pyramids, [and] cones,” as well as any “interruption, void, recess, bump, [or] protrusion” in the waveguide’s surface. RE630 patent Figs. 12A-12I; 7:21-23. The patent also explicitly includes applied materials such as “white-paint dots” and other “light scattering paints or pigments,” and it covers surface characteristics such as “surface texture” and “etched features” that cause light to scatter. RE630 patent 7:33-35, 16:5-7. Unlike Acer’s proposal, which improperly attempts to limit the claims to the single exemplary embodiment of “reflector 8”, SVV’s construction more accurately accounts for various disclosed categories of the “light extraction element” and therefore faithfully reflects the term’s full scope as it would be understood by a POSITA.

7. The term is not technical

The term “light extraction” is not a difficult technical term for which a construction would help the jury understand the meaning of the terms. *Kroy IP Holdings, LLC v. Safeway, Inc.*, No. 2:12-cv-800-WCB, 2014 WL 3735222, at *2 (E.D. Tex., July 28, 2014); *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”). “If a claim term is non-technical, is in plain English, and derives no special meaning from the patent and its prosecution history, then the court has no need to function as a thesaurus. To do so could well encroach upon the factfinder’s domain. The ‘ordinary’ meaning of such terms should speak for itself, and the court should avoid merely paraphrasing claim language with less accurate terminology.” Peter S. Mennell, et al., Federal Judicial Center, *Patent Case Management Judicial Guide*, § 5.1.4.3 (3d ed. 2016) (internal citations omitted). Accordingly, the Court need not provide any addition construction.

8. The appropriate construction

This term should be construed according to its plain and ordinary meaning which is “a characteristic, structure, or material that causes light to be directed out of a layer or waveguide.”

B. “light coupling area” (’197 patent, claims 3, 4; ’340 patent, claim 1; ’621 patent, claims 1, 26)

SVVTI’s Proposal	Acer’s Proposal
“an area of the optically transmissive sheet that receives and conditions external light”	“the portion of the broad-area surface where light is input into the broad-area surface from the light coupling elements”

1. The Term Was Not Redefined by the Patentee

The “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner*,

669 F.3d at 1365. Here, the patentee did not “clearly set forth a definition of the disputed claim” or “clearly express an intent to define the term.” *See id.* Neither did the patentee present “a clear disavowal of claim scope” through statements in the specification or prosecution history. *See id.* at 1366.

2. Acer’s Arguments Regarding Alleged Disavowal of "Edge-Lit" Applications Are Misplaced

Acer’s primary argument is that the patentee repeatedly disclaimed anything related to an edge-lit application, thereby limiting the “light coupling area” to only the broad-area surface. This mischaracterizes the disclosure, which presents the technology as an alternative to traditional edge-lit systems for use in the same markets, not a complete disavowal of the entire domain.

a) The Disclosure Contemplates Application in Traditional Edge-Lit Markets

The specification explicitly states that the disclosed technology has broad applicability, including in markets traditionally served by edge-lit devices. It notes that “this invention may be applied to a variety of panel lighting and signage applications where edge-lit LGPs have been traditionally employed”. ’197 patent 12:31-33. This demonstrates an intention to compete with or supplement edge-lit systems, not a “clear and unmistakable” disavowal of any association with a waveguide edge. *See Continental Circuits*, 915 F.3d at 798-99.

b) The Stated "Object of This Invention" Is Broader Than Defendant Claims

The Defendant selectively quotes the patent to frame the invention as solely solving the problem of inaccessible edges. However, the patent lists multiple objectives, including providing "convenient light injection into a planar waveguide... without having to penetrate into the waveguide's surface" and to "substantially reduc[e] or eliminat[e] the unwanted light spillage due to the coupling". ’197 patent 2:24-36. The intrinsic record explains that the focus is on a method of coupling (non-invasive, efficient) that can be applied to a face, not an absolute rejection of any system that couples light through an edge.

3. Acer's Proposal Improperly Narrows the Area's Function and Ignores "Conditioning"

Acer's construction limits the function of the area to simple "input." This ignores the important "conditioning" and "directing" functions of the area that are described in the specification and captured by SVV's proposed construction.

a) The Coupling Area "Conditions" Light for TIR

The specification describes a key function beyond mere input. The optical element is configured to inject light "at a sufficiently low out-of-plane angle permitting for the subsequent light propagation within by means of a total internal reflection." '197 patent 3:26-29. This act of angling the light to enable Total Internal Reflection ("TIR") is a "conditioning" function.

b) The Coupling Area "Directs" Light

The specification further explains that the optical element injects light "while directing the light beam towards a well-defined direction along the window pane." '197 patent 3:30-33. This shows the coupling area is not just a passive input port, but actively directs the light's propagation path within the waveguide.

4. Acer's Proposal Improperly Narrows the Location and Dimensions of the Area

Acer's construction limits the "light coupling area" to a two-dimensional "portion of the broad-area surface." This is directly refuted by intrinsic evidence showing the functional area is a three-dimensional region that can involve both broad-area surfaces.

a) The "TIR Envelope" Disproves the 2D Surface Limitation

Figure 13 and its description show that the functional coupling region is a three-dimensional "TIR envelope". This envelope is explicitly described as being formed by the sides of the coupling element "as well as the portion of surface 412 of the waveguide immediately below element 50". '197 patent 27:17-21. Because this functional "area" involves the opposing broad-area surface (412), the Acer's proposal limiting the area to only the surface where the element is attached (410) is incorrect.

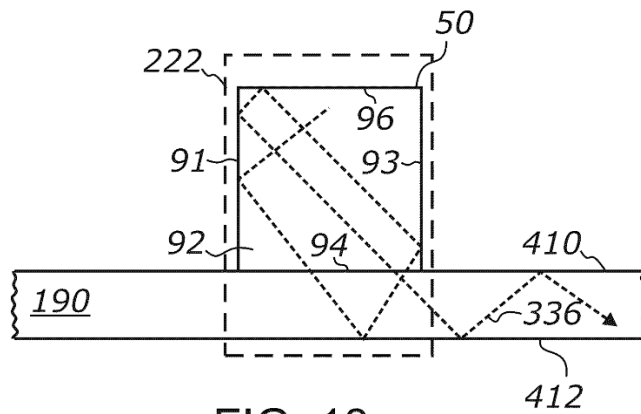


FIG. 13

'197 patent Fig. 13.

b) The "Area" Can Be a Broader Region Containing the Elements

The disclosure accompanying Figure 17 describes a "light transmitting film 780" laminated to the surface, onto which optical fibers (the "elements") are glued. '197 patent 28:10-13. The patent then refers to this entire region as the "light coupling area," stating that each fiber "is straightened in the light coupling area". '197 patent 29:43-47. This indicates the "area" is a broader region that contains the array of elements — not just the footprints of the elements themselves, as the Defendant's construction implies.

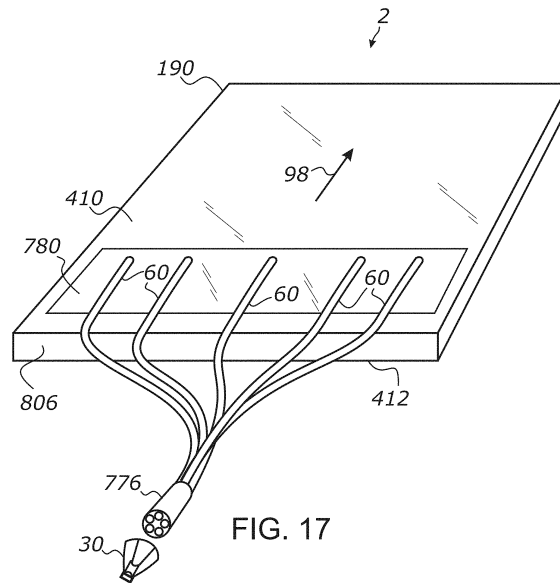


FIG. 17

5. The appropriate construction

This term should be construed as "an area of the optically transmissive sheet that receives and conditions external light."

C. “light coupling elements” (’197 patent, claim 1; ’340 patent, claims 2, 3; ’621 patent, claims 3, 4)

SVVTI’s Proposal	Defendants’ Proposal
Plain and ordinary meaning. Alternatively, “an optical structure designed to facilitate transfer of light between distinct optical components (e.g., from a light source such as LED to a waveguide).”	“a light transmitting structure separate from and optically coupled to the broad-area surface”

1. This Term Was Not Redefined by the Patentee and is not Technical

The disputed term was not redefined by the patentee. *See Thorner*, 669 F.3d at 1365. In addition, the term is not a difficult technical term for which a construction would help the jury understand the meaning of the term. *Kroy IP*, 2014 WL 3735222, at *2. Accordingly, the Court need not provide any addition construction.

2. The “Separate From” Limitation Is Directly Contradicted by the Specification

Acer’s core argument that the “light coupling elements” must be structures “separate from” the waveguide is an improper limitation that would exclude multiple embodiments explicitly disclosed in the patent. The intrinsic evidence shows that the elements can be integral with the waveguide surface.

a) Laminated Films Are Disclosed as Coupling Elements

The specification explicitly describes an embodiment where the coupling element is not a separate, block-like component. The patent states: “FIG. 5 illustrates an embodiment of system 2 in which linear optical element 6 is represented by a band or strip of optically transmissive prismatic film laminated onto surface 10 of window pane 4”. ’197 patent 17:27-30. A film that is laminated onto a surface becomes an integral part of that surface, directly refuting Acer’s proposal that the element must be “separate from” it.

b) Elements with “Embedded Microstructure” Are Disclosed

The patent further discloses embodiments that are not simple, separate objects attached to the surface. It describes that the “optical element 6 may include a light transmitting film or a thin plate structure which has two or more layers and is configured to redirect light internally by embedded microstructure rather than externally by surface microstructures”. This describes an element whose function comes from its internal composition, which is then applied to the

waveguide, again contradicting the narrow "separate structure" limitation proposed by the Defendant.

c) Defendant's Reliance on "Attached To" Is Flawed

The patent further discloses embodiments that are not simple, separate objects attached to the surface. It explains that the "optical element 6 may include a light transmitting film or a thin plate structure which has two or more layers and is configured to redirect light internally by embedded microstructure rather than externally by surface microstructures". '197 patent 20:56-60. This describes an element whose function comes from its internal composition, which is then applied to the waveguide, again contradicting the narrow "separate structure" limitation Acer proposes.

d) Acer's Argument Improperly Conflates the Description of Examples with a Limitation on the Entire Invention

Even if one were to assume for the sake of argument that all disclosed embodiments showed separate elements, it would not justify Acer's narrow construction. The '197 patent itself contains explicit statements that rebut this approach, making clear that the disclosed embodiments are merely illustrative and not limiting.

The specification contains clear language warning against the very type of narrowing Acer attempts. The specification states that the description should not "be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention". '197 patent 31:16-20. The specification also explains that the invention is embodied in the figures "for illustrative purposes only" and that the "system may vary as to configuration and as to details of the parts without departing from the basic concepts as disclosed herein." '197 patent 4:65-67, 6:16-19.

There is also no clear disavowal of integral elements. Merely describing exemplary embodiments as being "attached to" or "glued to" the waveguide does not constitute a clear disavowal of forming the elements integrally. The patent never states that the elements must be separate or that integral formation is outside of the scope of the invention.

Therefore, the fact that the specification might describe certain elements as being separate and attached does not preclude the claims from covering elements that are formed integrally with the waveguide.

3. The Alleged Disavowal of Proximity to an Edge Is Overstated

Acer reasserts its argument that the patent disavows all edge-lit applications, and therefore the “light coupling elements” must be on the broad-area surface. Def. Br. 21-22. This mischaracterizes the disclosure, which clearly contemplates applications near and along the edge.

a) Application in Traditional Edge-Lit Markets Is Explicitly Stated

The specification notes that the technology “may be applied to a variety of panel lighting and signage applications where edge-lit LGPs have been traditionally employed.” ’197 patent 12:31-33. This shows the invention is meant as an alternative or improvement for those applications, not a “clear and unmistakable” disavowal of any association with a waveguide edge. *See Continental Circuits*, 915 F.3d at 798-99.

b) The Specification Repeatedly Describes Placement Near an Edge

The patent consistently describes positioning the coupling element in close proximity to an edge. For example, it states: “Optical element 6 is positioned near a bottom edge of window pane 4 with its longitudinal axis 44 aligned generally parallel to the bottom edge of the pane”. ’197 patent 9:14-16. While the element is on the face, its close and intentional proximity to the edge undermines Acer’s argument that the invention is completely divorced from the concept of an edge. Acer’s construction improperly attempts to read this proximity out of the claims.

4. The appropriate construction

This term should be construed according to its plain and ordinary meaning. If the Court determines that a construction is required, SVVTI proposes “an optical structure designed to facilitate transfer of light between distinct optical components (e.g., from a light source such as LED to a waveguide).”

D. “light converting semiconductor material” (’157 patent, claims 1, 14; ’475 patent, claims 1, 14)

SVVTI’s Proposal	Defendants’ Proposal
Plain and ordinary meaning.	“photovoltaic semiconductor that absorbs light and converts it into charge carriers and electric current”

1. This Term Was Not Redefined by the Patentee and is Not Technical

The disputed term was not redefined by the patentee. *See Thorner*, 669 F.3d at 1365. In addition, this term is not a difficult technical term for which a construction would help the jury understand the meaning of the term. *Kroy IP*, 2014 WL 3735222, at *2. Accordingly, the Court need not provide any additional construction.

2. Acer’s Construction Is Directly Contradicted by the Asserted Claims’ Own Language

Acer’s argument that the patent only discloses conversion of light into electricity is fatally flawed because the plain language of the asserted claims themselves describes functions and materials consistent with light-to-light conversion.

a) Claim Language Describes Down-Conversion

The claims recite that the “light converting semiconductor material” is “configured to absorb light selectively such that photons with a higher energy are at least partially absorbed and converted into charge carriers and photons with a lower energy are transmitted”. ’475 patent, claim 1; 23:18-23. This description of selective absorption of higher-energy photons and transmission of lower-energy ones is a classic description of down-conversion (e.g., fluorescence), a form of light-to-light conversion. Acer’s construction improperly reads this function out of the claim.

b) Claim Language Recites Materials Known for Light-to-Light Conversion

The claims explicitly state that the active layer can comprise “quantum dots distributed within an optically transmissive material”. A POSITA would immediately recognize that quantum dots are a class of semiconductor materials well-known for their fluorescent properties (absorbing light of one wavelength and emitting light of a longer wavelength), in addition to their use in photovoltaics. *See Ex. AA*. The explicit inclusion of a material class with known light-to-light

conversion capabilities directly refutes Acer’s assertion that this function was “neither envisioned nor disclosed”. *See* Def. Br. 25-26.

3. Acer Improperly Narrows the Scope of the Invention

Acer cherry-picks the narrowest descriptions of the invention to argue that it is limited to “generating electricity from sunlight”. The specification, however, describes the invention’s field and objectives more broadly.

a) The “Field of the Invention” is Broader Than Generating Electricity

The patent states that the invention relates not only to “photovoltaic devices [and] solar cells” but also to “light detectors having light trapping microstructures”. ’475 patent 1:59-60. A light detector is a broader category of device that does not necessarily generate electricity for power.

b) The Stated Problem is a Fundamental Optical Problem

Acer frames the problem as solely related to the cost of solar cells. However, the patent states a broader objective is to provide “efficient light coupling and trapping” to “minimiz[e] energy loss” and to solve problems where prior art devices “cannot prevent for a substantial portion of incident light to escape from the device without being absorbed”. ’475 patent 3:30-32, 2:37-44. This is a fundamental optical problem of absorption efficiency, applicable to more than just electricity-generating solar cells.

4. The Defendant Improperly Imports a Narrow Definition from an Exemplary Embodiment

Acer attempts to define the claim term “light converting semiconductor material” by seizing on the description of one specific example, “[p]hotovoltaic layer 4”. *See* Def. Br. 25. This is an improper attempt to import a limitation from a single embodiment into the broader claims.

a) The Patent Discloses a Broad Variety of Material Compositions and Physical Forms

The specification makes clear that the photoresponsive layer is not limited to one type of material. Acer’s attempt to narrow the term is contradicted by the patent’s disclosure of a wide variety in both chemical composition and physical morphology. The specification discloses that

the photoresponsive layer can be made from numerous compositions, including “crystalline silicon”, “amorphous silicon (a-Si) solar cells”, “a CdTe photovoltaic structure”, “a copper indium gallium deselenide (CIGS) structure”, and “a multi-junction PV structure”. *See* ’475 patent 11:4-21. The disclosure goes even further, explaining that these semiconductor materials can take a vast array of physical forms. The patent states that the layer can incorporate “Si or other semiconductor photovoltaic materials in the form of particles, spheres, rods, clusters, quantum dots, nanodots, nanowires, etc. embedded into various transparent or semi-transparent materials”. ’475 patent 11:40-44. This dual variety, encompassing different material compositions as well as diverse physical forms from bulk layers to embedded nanoparticles, shows that the underlying technology is exceptionally broad and cannot be confined to Acer’s narrow photovoltaic-only construction. *Johnson Worldwide Associates, Inc. v. Zebco Corp.*, 175 F.3d 985, 991 (Fed. Cir. 1999) (“[v]aried use of a disputed term in the written description demonstrates the breadth of the term rather than providing a limited definition.”).

b) The Patentee Did Not Act as Its Own Lexicographer for the Claimed Term

The Defendant’s argument hinges on a definition provided for “[p]hotovoltaic layer 4”. The patentee did not state that this definition applies to all “light converting semiconductor materials” throughout the patent. Limiting the claim term to this narrow definition from a single example would improperly exclude other disclosed embodiments, such as those using quantum dots capable of fluorescence. *See* Ex. AA.

5. The appropriate construction

This term should be construed according to its plain and ordinary meaning.

VII. CONCLUSION

This Court should adopt SVVTI’s proposed constructions, which are consistent with the intrinsic and extrinsic record.

DATED: July 13, 2025

Respectfully submitted,

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